DEPARTMENT of ENVIRONMENTAL SERVICES Water Division - Watershed Management Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: TOM POND		Lake Area (ha):	12.75
Town: WARNER		Maximum depth (m):	4.1
County: Merrima	ck	Mean depth (m):	2.5
River Basin: Merrima	ck	Volume (m³):	314000
Latitude: 43°15'0		Relative depth:	1.0
Longitude: 71°45'2	1" W	Shore configuration:	1.26
Elevation (ft):	383	Areal water load (m/yr)	: 8.70
Shore length (m):	1600	Flushing rate (yr^{-1}) :	3.50
Watershed area (ha):	243.3	P retention coeff.:	0.57
<pre>% watershed ponded:</pre>	3.9	Lake type:	natural

BIOLOGICAL:	19 January 1999	23 July 1998
DOM. PHYTOPLANKTON (% TOTAL) #1	NO WINTER PLANKTON	RHIZOSOLENIA 45%
#2	ANALYZED	SYNEDRA 45%
#3		
PHYTOPLANKTON ABUNDANCE (units/mL)		
CHLOROPHYLL-A (µg/L)		13.61
DOM. ZOOPLANKTON (% TOTAL) #1		KERATELLA 59%
#2		KELLICOTTIA 10%
#3		NAUPLIUS LARVA 8%
ROTIFERS/LITER		663
MICROCRUSTACEA/LITER		75
ZOOPLANKTON ABUNDANCE (#/L)		827
VASCULAR PLANT ABUNDANCE		Scattered
SECCHI DISK TRANSPARENCY (m)		2.2
BOTTOM DISSOLVED OXYGEN (mg/L)	8.8	0.2
BACTERIA (E. coli, #/100 ml) #1		1
#2		
#3		

SUMMER THERMAL STRATIFICATION:

stratified

Depth of thermocline (m): 1.7 Hypolimnion volume (m^3) : 3250 Anoxic volume (m^3) : 3250

CHEMICAL:			TOM POND WARNER		
	19 January 1999		23 July 1998		
DEPTH (m)	1.5	3.0	1.0		3.0
pH (units)	6.3	6.2	7.0		6.5
A.N.C. (Alkalinity)	9.4	12.1	9.4		10.6
NITRATE NITROGEN	0.32	0.22	< 0.05		< 0.05
TOTAL KJELDAHL NITROGEN	0.30	0.30	0.30		0.40
TOTAL PHOSPHORUS	0.019	0.009	0.008		0.009
CONDUCTIVITY (µmhos/cm)	107.1	125.7	88.9		94.6
APPARENT COLOR (cpu)	16	17	25	,	27
MAGNESIUM			0.85		
CALCIUM			5.1		
SODIUM			9.7		
POTASSIUM			0.79	211111 2 9 7 / 2 / 2	
CHLORIDE	24	28	17		18
SULFATE	4	4	3		3
TN : TP	33	58	38		44
CALCITE SATURATION INDEX			2.6		

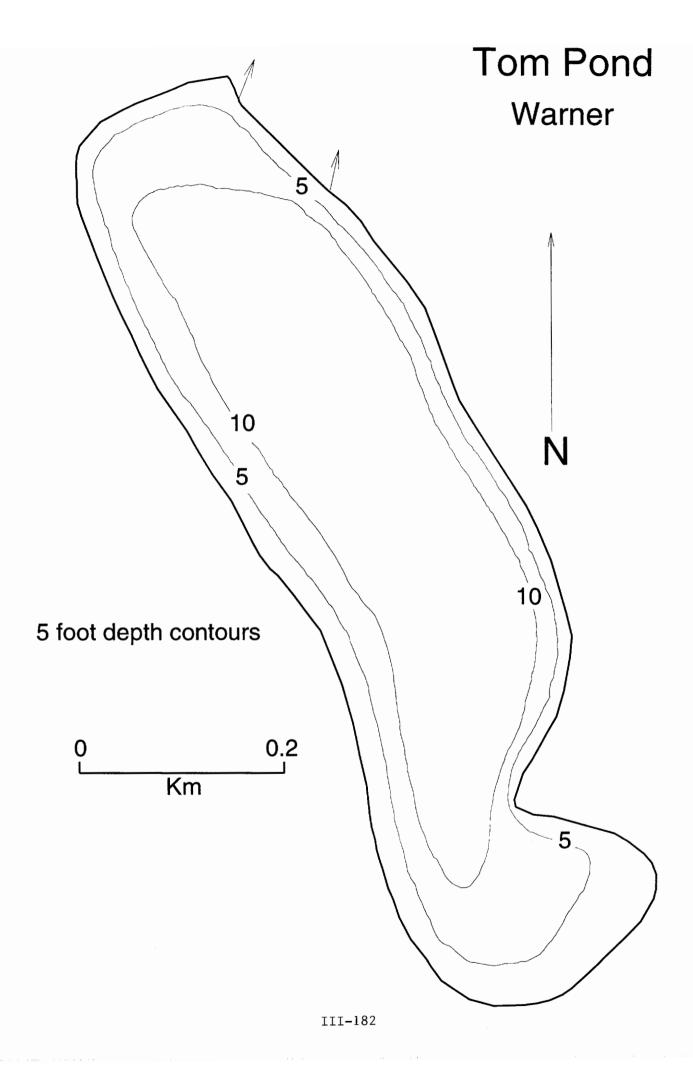
All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1998

D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
4	3	1	3	11	Meso.

COMMENTS:

- 1. aka Diamond Pond.
- 2. 10 mph speed limit on the pond.
- 3. No public access; pond was accessed over private land with a canoe.
- 4. Tom Pond was previously surveyed and classified in 1980. There was no change in trophic class but some trophic indicators deteriorated; e.g., the chlorophyll more than doubled (6 to 13 mg/m³) between the two dates. In 1980, the water column was not stratified and there was plenty of dissolved oxygen to the bottom. In 1998, a thermocline existed but a very small hypolimnion was present and there was essentially no oxygen at the bottom.
- 5. Tom Pond has participated in VLAP since 1987. The data indicates an improving trend for chlorophyll and phosphorus and a stable trend for Secchi transparency during this period.



FIELD DATA SHEET

LAKE: TOM POND DATE: 07/23/1998

TOWN: WARNER

WEATHER: RAINY

DEPTH (M)	TEMP (°C)	*DISSOLVED OXYGEN	OXYGEN SATURATION
0.1	25.3	9.2	111 %
, 1.0	25.2	9.3	112 %
2.0	19.6	12.1	130 %
3.0	15.7	5.9	58 %
4.0	14.1	0.2	2 %
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SECCHI DISK (m): 2.2

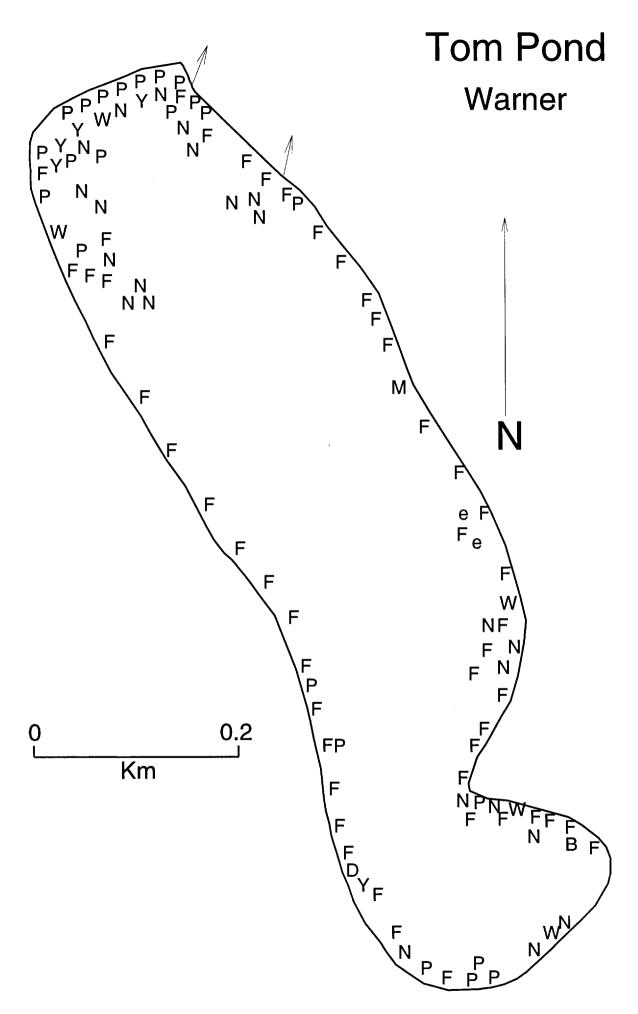
COMMENTS:

BOTTOM DEPTH (m): 4.1

TIME: 1100

Secchi reading may have been limited by rainfall.

*Dissolved oxygen values are in mg/L



AQUATIC PLANT SURVEY

LAKE: TOM POND TOWN: WARNER DATE: 07/23/1998 PLANT NAME ABUNDANCE Key GENERIC COMMON F Floating heart Nymphoides cordatum Scattered P Pickerelweed Pontederia cordata Scattered N Nymphaea White water lily Scattered В Brasenia schreberi Water shield Sparse Y Nuphar Yellow water lily Sparse D Decodon verticillatus Swamp loosestrife Sparse W Potamogeton Pondweed Sparse е Elodea nuttallii Waterweed Sparse M Myriophyllum humile Water milfoil Sparse

OVERALL ABUNDANCE: Scattered

GENERAL OBSERVATIONS:

1. Raining extremely hard; visibility into the water was poor; additional submerged plants may have been present but not observed.